

Date: Monday, 1/28/2008 12:01:05 PM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : STEP WELDMENT
Job Number : 37029	
Estimate Number : 12577	
P.O. Number :	Part Number : D3562042
This Issue : 1/28/2008 S.O. No. :	Drawing Number : D3562 UNDER REVIEW
Prsht Rev. : NC	Project Number : N/A
First Issue : 1 / Type : LARGE FAB ASSY	Drawing Revision : D
Previous Run : 36499	Material :
Written By :	Due Date : 2/6/2008 Qty: 1 Um: Each
Checked & Approved By : <u>08.01.28</u>	
Comment : Est Rev:A New Issue 06-11-09 JLM	
Est rev B ECN 987 07.10.09 EC verified by: DD	
Est Rev:C ECN1048 07-12-18 DD verified by: EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D2622120C	Extrusion
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Qty Part # Description Batch:

1 D2622-120C Extrusion

B35618

Check Material for any Dents or Defects

SAD 08.01.29

①

2.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
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Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2622 extrusion as per Dwg D3562

2-Deburr and bevel ends for welding

SAD 08.01.29

②

3.0	QC5	INSPECT WORK TO CURRENT STEP
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Comment: INSPECT WORK TO CURRENT STEP

SAD 08.01.29

③

4.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
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Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

SAD 08.01.29

④

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 1/28/2008 12:01:06 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 37029

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

6.0

D3560042

ARM WELDMENT



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

ARM WELDMENT

Batch: 335030

SE 08.01.29

7.0

D3560044

ARM WELDMENT



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

ARM WELDMENT

Batch: 335298

SE 08.01.29

8.0

MS20600AD4W5

Blind Rivet



Comment: Qty.: 36.0000 Each(s)/Unit Total : 36.0000 Each(s)

Blind Rivet

batch: M106375

SE 08.01.29

9.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Drill Rivet holes as per dwg D3562. Touch up alodine

2- Rivet legs using Magnabond as per dwg D3562.

*****Ensure to wipe off any excess magnabond *****

A/R Magnabond 6398 Batch: M104677

SE 08.01.29
SE 08.01.29
SE 08.01.29

(P607)

10.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SE 06/01/30

11.0

D2734

206 Step Endplate



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part Number

2 D2734

Description Batch

End Cap

B34485

SE 08.01.30

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3562042 PAR #: N/A Fault Category: Prod / ~~Testing~~ Gen NCR: Yes No DQA: A Date: 2008/02/10
QA: N/C Closed: _____ Date: _____

NCR: <u>37029</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08/01/29	# 9.0	During Reaming the rivet was inserted ^{Reamed} wrong and had to be removed during removal the hole was enlarged.	[Signature]	Drill out all Reams on D 3560-41 Arm weldment.	1/2 08-01-29	[Signature]	[Signature]	[Signature]
				Clean off all all magnabond.	1/2 08-01-29			
		QC. Human Error.	[Signature]	QC inspect condition of Arm and step	1/4 08-01-29	[Signature]	[Signature]	[Signature]
				Fill in hole affected holes on Step and Arm weldment with weld as per Q52004	1/2 08-01-29			
				Re Drill holes in correct location to ϕ . 128" in dia. Replace Rivets <u>3106375</u> 16 places	1/2 08-01-29			

NOTE: Date & initial all entries

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Job Number: 37029

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Job Number:



Seq. #:

Machine Or Operation:

Description:

12.0

LARGE FAB 1

LARGE-FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld end caps as per Dwg D3562& QSI 004. Inspect for foreign objects as per QSI 024.

A/R Aluminum Rod M105058

2-Grind end cap welds flush as per Dwg D3562

08-01-30 1
08-01-30 1

13.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

08/01/31 (1)

14.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08/01/31 (4)

15.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

08-02-01

16.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Wing Walk as per Dwg D3562 and QSI 005 4.4

Batch:

M 106 894 *M/L 08/02/01*

17.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

8/2/4 50

18.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Assembly Kit

08/02/04 (1)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 1/28/2008 12:01:06 PM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP WELDMENT

Job Number: 37029

Part Number: D3562042

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

QC21

FINAL INSPECTION/W/O RELEASE



①

Comment: FINAL INSPECTION/W/O RELEASE

D 08/02/04

Job Completion



U 08-02-04

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

D3562-1, MAKE FROM EXTRUSION D2622

D3560-043 ARM WELDMENT

D3560-041 ARM WELDMENT

D3560-042 ARM WELDMENT

D3560-044 ARM WELDMENT

D3562-1, MAKE FROM EXTRUSION D2622

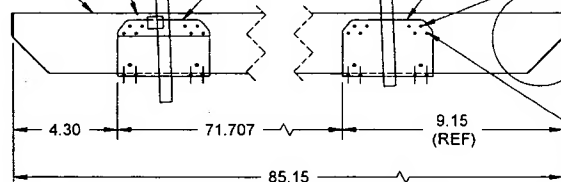
APPLY BLACK ANTI-SKID ON TOP SURFACE TO BOTTOM OF TOP RADIUS

APPLY BLACK ANTI-SKID ON TOP SURFACE TO BOTTOM OF TOP RADIUS

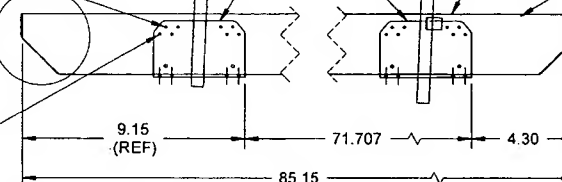
TRANSFER DRILL #30 DEBURR & TOUCH UP HOLES WITH CHEMICAL CONVERSION COAT BEFORE RIVETING (32 PLACES PER STEP)

REFER TO STEP END DETAIL

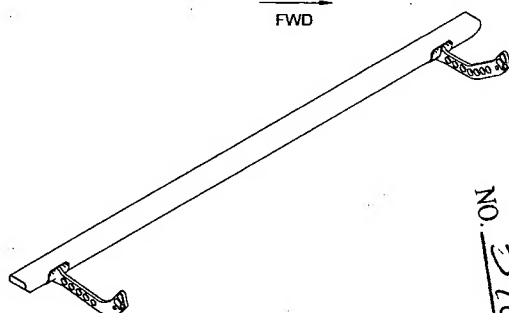
INSTALL MS20600AD4W5 RIVET (32 PLACES PER STEP)



MEASURED BEFORE END CAPS WELDED IN PLACE



MEASURED BEFORE END CAPS WELDED IN PLACE

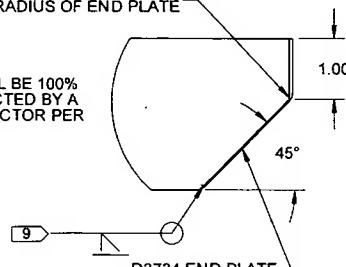


D3562-041 LH STEP ASSEMBLY

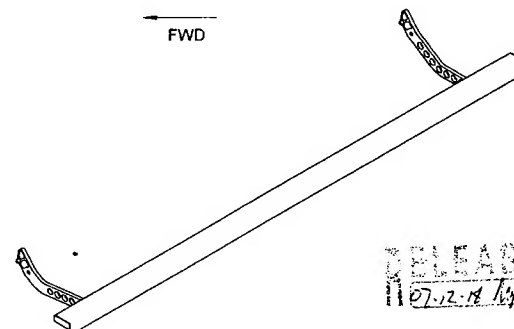
ROUND CORNER OF EXTRUSION TO MATCH BEND RADIUS OF END PLATE

NOTE: ALL WELDS SHALL BE 100% VISUALLY INSPECTED BY A QUALIFIED INSPECTOR PER PART QSI 004

WORK ORDER NO. 37029
SUBJECT TO AMENDMENT WITHOUT NOTICE
UNCONTROLLED COPY
ENGINEERING
RETURN TO
SHOP COPY



TYPICAL STEP END DETAIL
SCALE 1:2



D3562-042 RH STEP ASSEMBLY

UNDER REVIEW

NOTES:

1) MATERIAL: N/A
2) FINISH:

- i) CHEMICAL CONVERSION COAT STEP EXTRUSION PER DART QSI 005 4.1 BEFORE ASSEMBLY
- ii) POWDER COAT ASSEMBLY GLOSS WHITE (4.3.5.1) OR GREY SANDTEX (4.3.5.6) OR BLACK SANDTEX (4.3.5.7) OR GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3
- iii) BLACK ANTI-SKID PAINT PER DART QSI 005 4.4

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: NONE

7) WEIGHT: 8.79 lbs

8) INSTALL ARM WELDMENTS WITH A LAYER OF MAGNOBOND 6398 BETWEEN THE ARM WELDMENT AND STEP EXTRUSION. FILL ANY TOOLING HOLES WITH MAGNOBOND 6398. CLEAN OFF EXCESS BEFORE POWDER COATING.

9) WELDING: PER DART QSI 004

QTY	QTY	P/N	DESCRIPTION
-041	-042		
X		D3562-041	LH STEP ASSEMBLY
	X	D3562-042	RH STEP ASSEMBLY
1		D3560-041	ARM WELDMENT
1	1	D3560-042	ARM WELDMENT
1		D3560-043	ARM WELDMENT
1	1	D3560-044	ARM WELDMENT
1	1	D3562-1	STEP EXTRUSION
32	32	MS20600AD4W5	RIVET
2	2	D2734	END PLATE

D	REMOVE D2808 SPACER NOTE; REDRAWN IN SOLIDWORKS	DC	07.11.16
C	NOW MAGNOBOND, ADD D2808, REMOVE 4 RIVETS	CP	07.06.19
B	ARMS NOW RIVETED TO STEP	CP	07.01.15
A	NEW ISSUE	CP	06.09.26
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	07.11.16		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3562** REV. D
SHEET 1 OF 1

TITLE **STEP ASSEMBLY** SCALE 1:5

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